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## INTRODUCTION

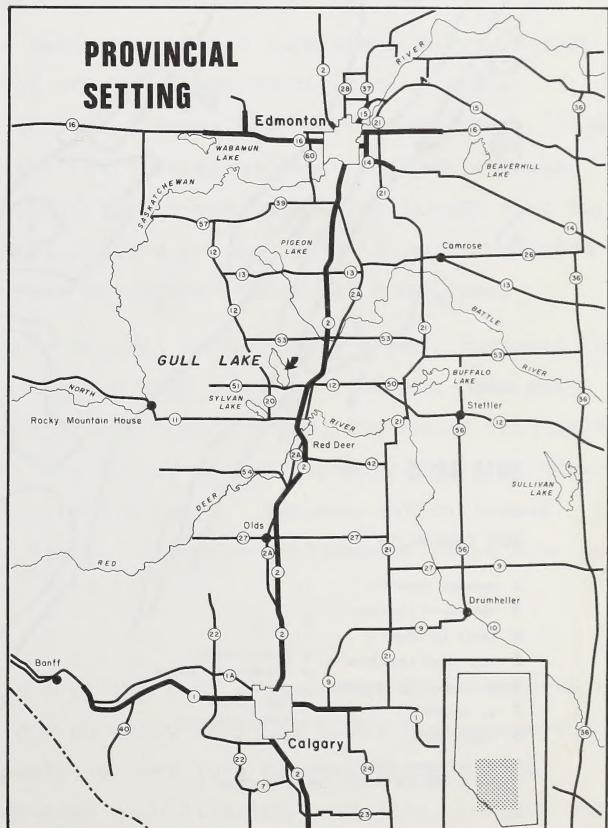
The increasingly heavy use of all recreation facilities today points out the important role that recreation is performing in the lives of many Canadians. Lakes are often first choices for the development of seasonal residences and are equally popular destinations for activities such as boating, swimming, camping, fishing, and hunting. Gull Lake appeals to many recreators as a result of its central location midway between Edmonton and Calgary, (Figure 1) and because of the diversity of recreation pursuits afforded by the lake's many characteristics.

To effectively accommodate recreation demand within an active agricultural area and, at the same time, plan for the maintenance of environmental quality, a management plan is required for Gull Lake. The purpose of this brochure is to provide to all interested information about the lake's uses and problems and explore management directions. It must be emphasized that a management plan has yet to be adopted. The objective at this time is to seek further information from interested groups and individuals in order to produce a management plan that reflects, as much as possible, the many needs of current and future users of Gull Lake.

## IMPORTANCE AND USES

As indicated on the cover, Gull is a large lake in a small basin with a surface area of 24 square miles and a watershed of only 95 square miles. The lake is also quite shallow with about 25 per cent less than 10 feet deep, approximately half the lake with a depth of 20 feet or greater, and a maximum depth of 27 feet.

Crop cultivation and live-stock production are the major land uses in the Gull Lake area. To the south and west of the lake, most of the soils have only moderate limitations (Class 2) for crop production (Figure 2). In the northern and eastern sections where the land is





August 1978 - Figure 2

more rolling, several soil classes are present ranging from soils that have moderately severe limitations to soils that have no capability for arable culture or permanent pasture. Two shoreland areas, one at the northern end of the lake and another along the western shoreline, have no significant limitations or only slight limitations to the production of waterfowl.

As a family sport fishery, Gull Lake is rated as moderately important from a regional point of view and low provincially. Northern pike and walleye are the chief sport fish. Should natural reproduction be successful, yellow perch, a recently introduced species, may become important as sport fish in the future.

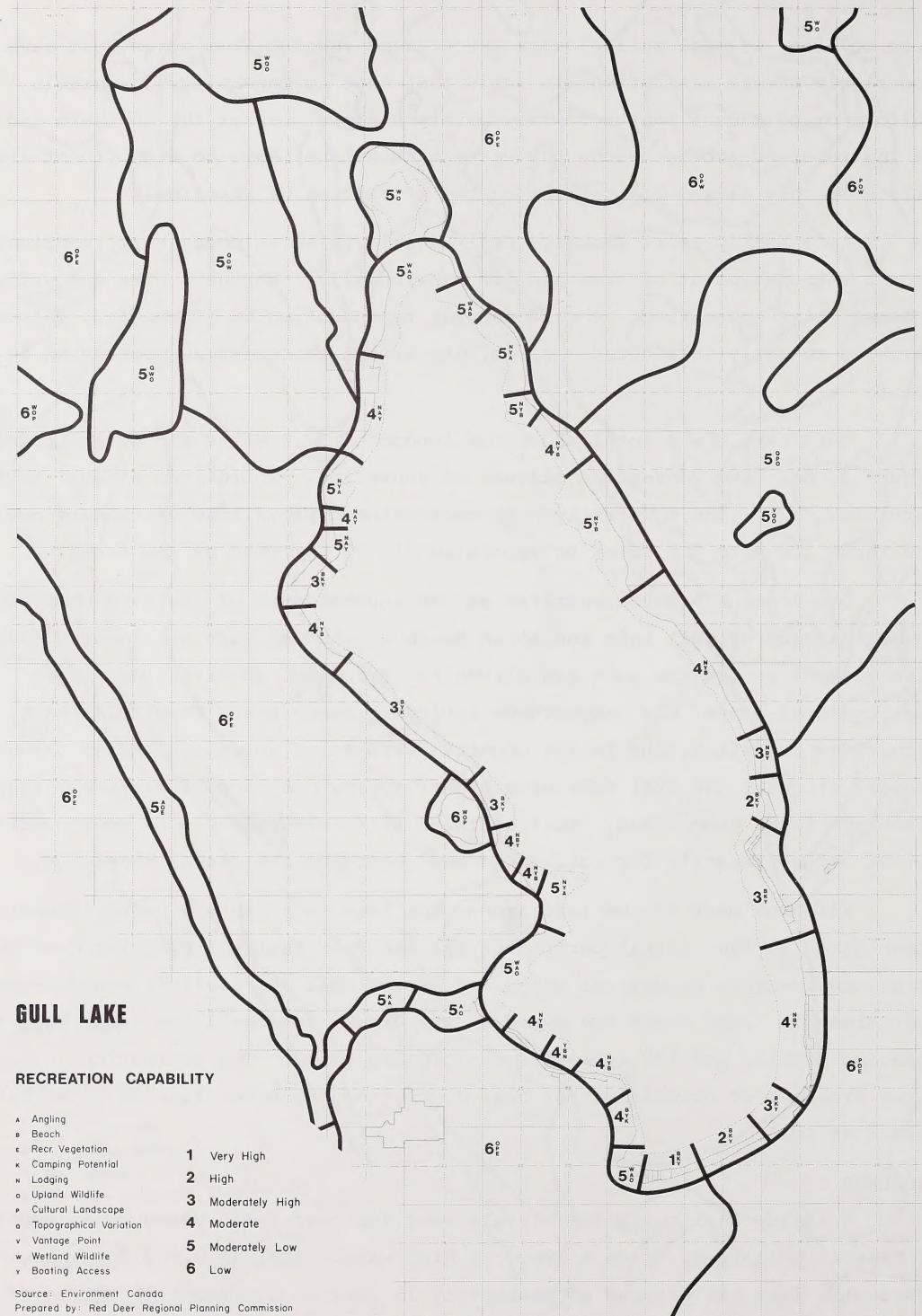
Gull Lake has a total shoreline length of 33.5 miles and as indicated on Figure 3, has five recreation classes of shoreline. Shorelines at Gull having very high, high, and moderately high recreation capabilities or classes one, two, and three add up to 8.6 miles or approximately 25 per cent of the total.

Development has concentrated at the southern end of the lake where the Summer Village of Gull Lake and Aspen Beach Provincial Park are located (Figure 4). Also present around the lake are eleven other cottage subdivisions, seven institutional camps, six campgrounds including Aspen Beach Provincial Park, five picnic-day use sites, and twelve country residential acreages. Known archaeological sites in the Gull Lake area number thirty-one, and it is likely that further sites are to be discovered. Most of these sites are probably in poor condition and are of value primarily for collecting and recording historical knowledge.

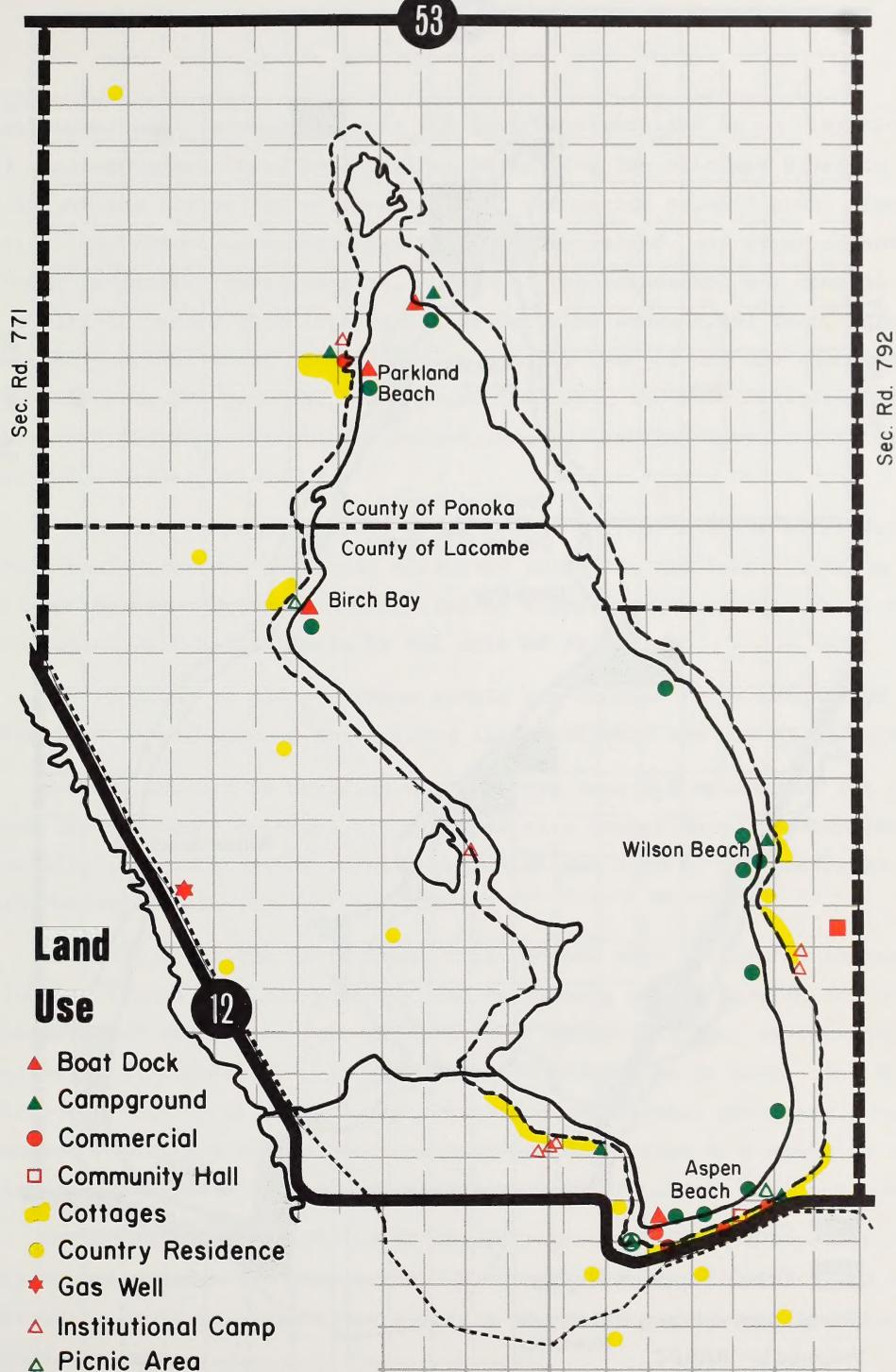
Although most of the land around the lake is privately owned, compared to other lakes in the central portion of the Red Deer Regional Planning Commission area, considerable amounts of shoreland around Gull are publicly owned (Figure 5). Approximately 1,800 acres are owned by the Crown, another 1,800 acres have crown riparian rights, and 135 acres are municipally owned. Two recreation leases, three licences of occupation for boat docks, and one miscellaneous lease have been issued at Gull.

#### PROBLEMS

A steady decline in lake levels over the past fifty years is an important problem at Gull Lake. From a historic high water level of 2,963 feet above sea level, the lake has dropped approximately 15 feet to a present elevation of 2,947.88 feet. After investigating several stabilization proposals, in 1970 the

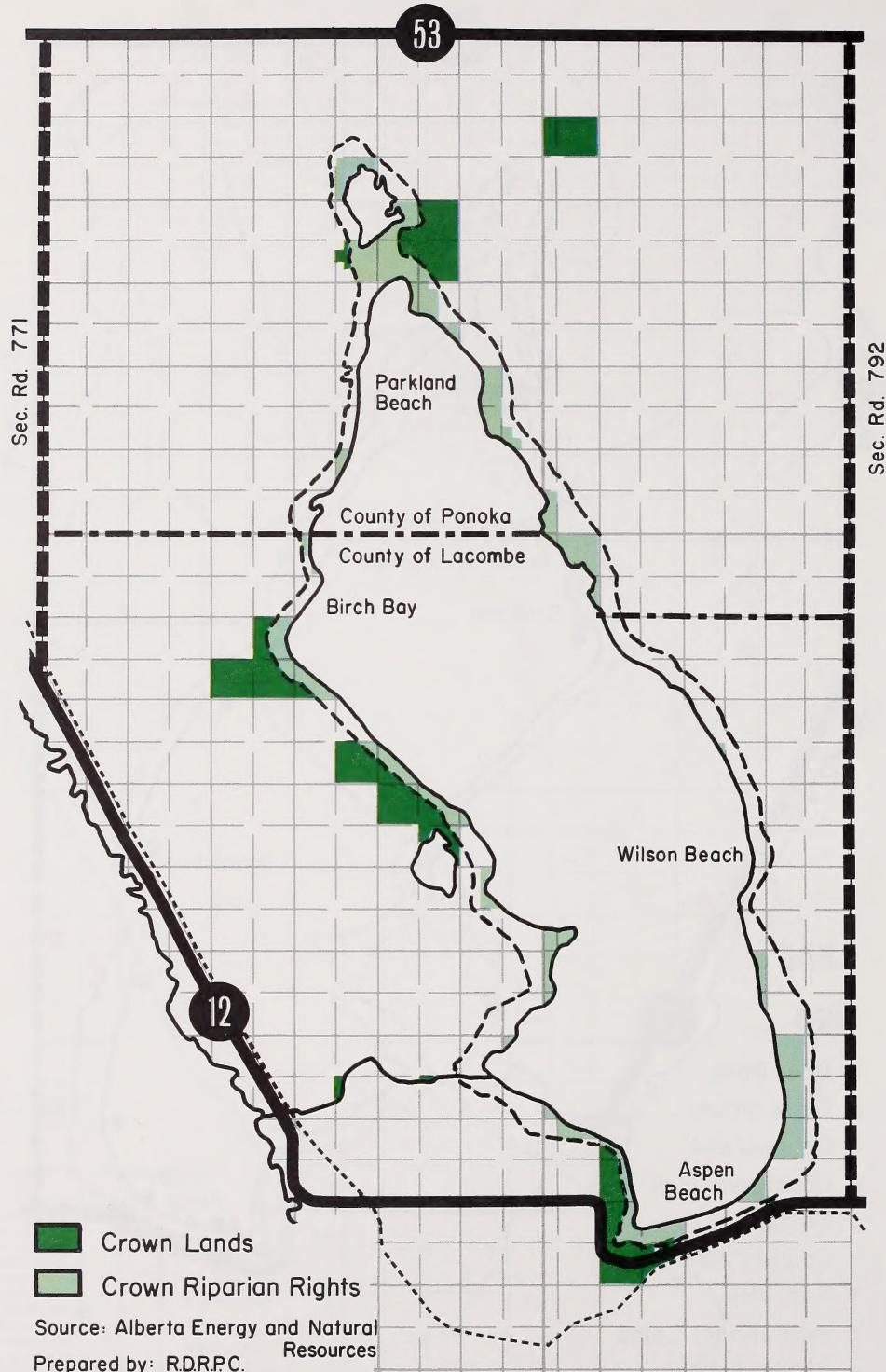


August 1978 Figure 3



Source: Counties of Lacombe and Ponoka

Prepared by: Red Deer Regional Planning Commission



Alberta Government recommended that the lake be stabilized at an elevation of 2,953 feet above sea level by diverting water from the Blindman River to Gull. This height was arrived at after evaluating recreation capabilities, beach materials, livestock carrying capacity of the shoreland, and existing and potential recreation developments. A further recommendation was control over the lake outlet to insure that lake levels do not rise above 2,954 feet. Subsequently, because of concerns about possible water quality changes and the flooding of vegetation which has grown on the exposed lake bed, the stabilization level was revised to 2,950 feet. It is recognized, though, that the level could vary above or below 2,950 foot level.

A decrease in water quality could become a problem since water from the Blindman could increase the total dissolved solids in the lake. Data on water quality is being collected and evaluated by Alberta Environment. It is expected that a report will be available by the fall of 1978.

The lowering of water surface levels has exposed large amounts of land which has resulted in problems of determining land ownership and use of accrued lands.

Another problem is deciding on long term uses and management for public reserve lands. Since reserves are provided as a condition of subdivision, they are usually located adjacent to cottages which can lead to use conflicts between cottage users and non-resident recreators.

Degradation of the environment could become more serious as recreation development around the lake proceeds and as farming intensifies in the study area. The clearing of vegetation for agriculture is continuing and, as recreation use increases, high capability wildlife areas are threatened or lost. The fish population is likely to decrease as recreation development increases. Aquatic vegetation interferes with some recreation pursuits, such as boating or swimming, but its removal will adversely affect the success of natural fish reproduction.

Difficulties could also arise should intensive livestock operations expand near recreation nodes and vice versa. Both agricultural efficiency and recreation satisfaction could be hampered as a result of conflicts between these two incomparable uses.

Public access points to the lake are widely scattered, and in relation to the lake's size there is certainly no over-supply. As well, several access points are not particularly useable in as much as they are low and lack adequate drainage.

Conflicts between water recreation activities such as swimming, sailing, and power boating are becoming more problematic as recreation use intensifies.

Lack of co-ordination among agencies having responsibilities in the lake area is another problem. The Counties of Lacombe and Ponoka and the Summer Village of Gull Lake have jurisdiction over land use while a number of provincial government departments administer transportation, fish and wildlife, parks, energy, archaeological and historic sites, and water.

Non-residents travelling to the lake to recreate make use of county roads resulting in heavier maintenance costs for the counties. County taxpayers are, in effect, partially paying for the recreation of those who live in other places in the province.

Another problem is congestion and lack of safety along Highway No. 12 around the southern end of the lake. Many holiday trailers and motorhomes are on the highway or are entering or exiting at peak periods.

Although a number of other problems could be identified, the conclusion is clear, a need exists to develop and adopt a management strategy wherein problems are recognized and addressed in an integrated fashion.

#### REGIONAL ROLE

The Red Deer Regional Planning Commission has adopted the following philosophy for managing all lakes in the region, including Gull:

Lakes are a public resource and consequently they should be planned and managed for the total public good as part of a regional open space and recreation area system, but this system must reflect the need for conservation, economics, and private demands where compatible with the total public good, now and in the future.

In addition, the Commission has classified Gull Lake as a provincial development lake. This classification indicates that a variety of recreation facilities, often intensive in nature, can be established by the public and private sectors of the economy with the extent and type of development dependent on the physical

capabilities of the lake to support development without appreciable environmental harm. With this approach, environmental and recreational benefits possible can be identified and planned for Gull in relation to all other lakes in a regional lake system.

#### DEVELOPMENT POTENTIAL

A basic task that must be carried out when preparing a lake management plan is to estimate the point at which excessive deterioration of the environment or recreation satisfaction will occur if development continues. The approach used to determine the development capacity for Gull Lake is based on the surface area capacity for boating. Using this methodology, it was concluded that Gull Lake could support 10,710 recreation units with a recreation unit defined as a space or provisions for a group of four people. Potential capacity, the extent of existing development, and possible additions are displayed in Table 1. It should be pointed out that the water surface area capacity method is conservative compared to other approaches. Of note is that 15 per cent of the units have been allocated for cottage development. This proportion is in keeping with the Commission's philosophy that lakes are a public resource and most developments should be of the type that will accommodate the general public.

TABLE 1. GULL LAKE : POSSIBLE ADDITIONAL DEVELOPMENT

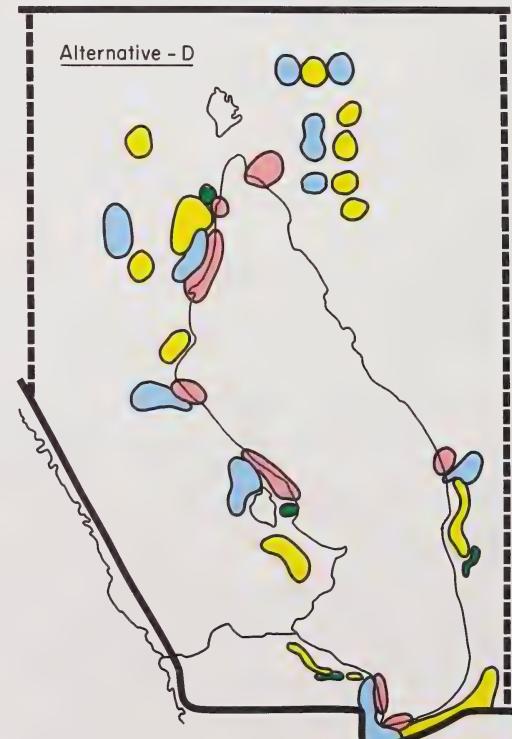
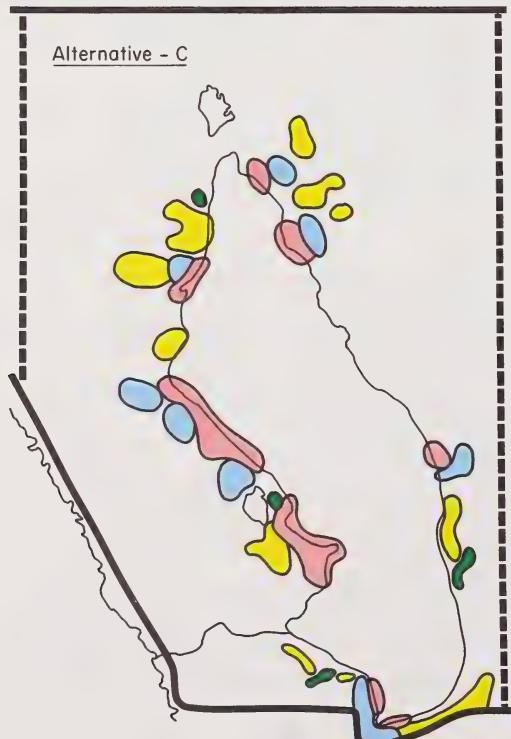
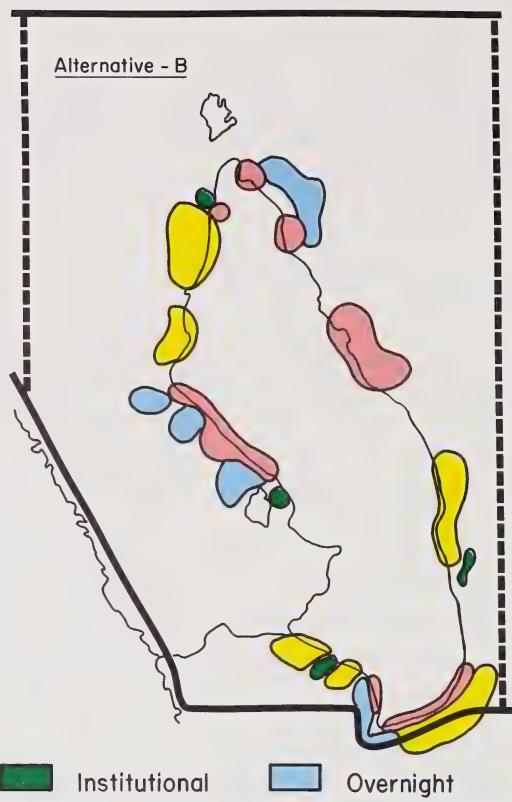
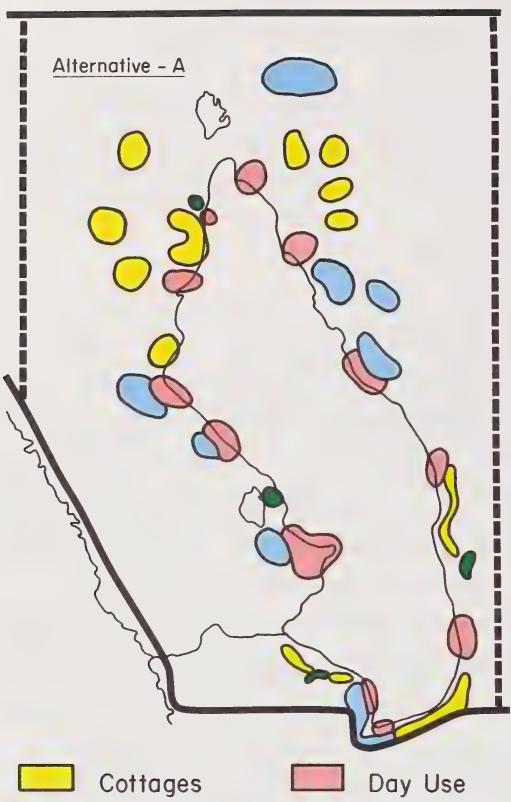
Recreation Unit Category	Potential Capacity	Existing Development	Possible Additions
Cottage lots	1,530	776	754
Other overnight units	4,880	1,192	3,688
Day units	4,300	1,040	3,260
Total	10,710	3,008	7,702

Source: Red Deer Regional Planning Commission

#### MANAGEMENT DIRECTIONS

##### Alternatives

The designation of Gull Lake as a provincial development lake within a regional lake system has provided policy guidelines for planning and development. The next step is to evaluate where the types of recreation development at Gull could be located and how farming the natural environment can be maintained. To provide a basis for discussion, four alternate land use patterns were devised (Figure 6).



August 1978 **Figure 6**

With Alternate A, conflicting uses such as cottages and day use areas are separated as much as possible and development is directed to treed sites and areas with low capability soils for crop production. More and smaller units of development are present and a greater proportion of development is located back from the shoreline.

Conflicting uses are also separated in Alternate B but developments are located along the shoreline. Large cottage developments are sited in the County of Ponoka, small cottage extensions are present in the County of Lacombe, and considerable expansion of the Summer Village of Gull Lake is indicated.

In Alternate C, possible conflicting uses are placed near one another so as to allow common use of day areas. Development is allocated to both shoreland and intermediate backland areas with little good soil used. Existing public land is used extensively. Most cottage development is located in the County of Ponoka with some expansion of the Summer Village of Gull Lake.

A large number of small developments are provided in Alternate D with most located in backland areas away from the shoreline. As in Alternate C, possible conflicting uses are placed near one another to make use of common day areas. Most cottage development is located in the County of Ponoka.

#### Land Use Allocation

On the basis of views expressed by Council members of the Counties of Lacombe and Ponoka and the Summer Village of Gull Lake on the alternatives, a conceptual land use allocation plan displaying functional shoreland sub-areas, types, locations, and levels of development as well as major transportation routes has been devised (Table 2 and Figure 7). Potential development has been separated into two time periods or phases, the next five years, and the following fifteen to twenty years.

Since Gull is a provincial development lake, as far as long term development is concerned, emphasis is placed first on recreational enjoyment by the general public and second for cottage development, but with the overall goal of environment conservation. Although similar to some extent, each shoreland sub-area differs from all others as a result of its own combination of physical characteristics, land uses, and recreation potential.

TABLE 2. POSSIBLE DEVELOPMENT DISTRIBUTION : GULL LAKE

Area	Existing			Phase I			Phase II			Total			Unit Total
	Day use	Over-night	Cott-ages	Day use	Over-night	Cott-ages	Day use	Over-night	Cott-ages	Day use	Over-night	Cott-ages	
A	0	0	0	0	0	0	0	0	0	0	0	0	0
B	25	15	0	200	0	0	200	100	0	425	115	0	540
C	15	5	0	100	450	0	100	600	0	215	1055	0	1270
D	0	50	155	0	25	25	560	0	0	560	75	180	815
E	50	8	259	0	0	91	0	0	100	50	8	450	508
F	925	900	24	0	0	0	200	0	-24	1125	900	0	2025
G	0	52	72	0	0	0	0	0	72	0	52	144	196
H	0	0	0	0	0	0	0	0	0	0	0	0	0
I	0	25	0	0	15	0	0	48	0	0	88	0	88
J	0	0	0	0	0	0	1700	2400	0	1700	2400	0	4100
K	25	137	266	0	20	135	200	30	355	225	187	756	1168
Total	1040	1192	776	300	510	251	2960	3178	503	4300	4880	1530	10710

Source: Red Deer Regional Planning Commission, 1978.

#### Area A

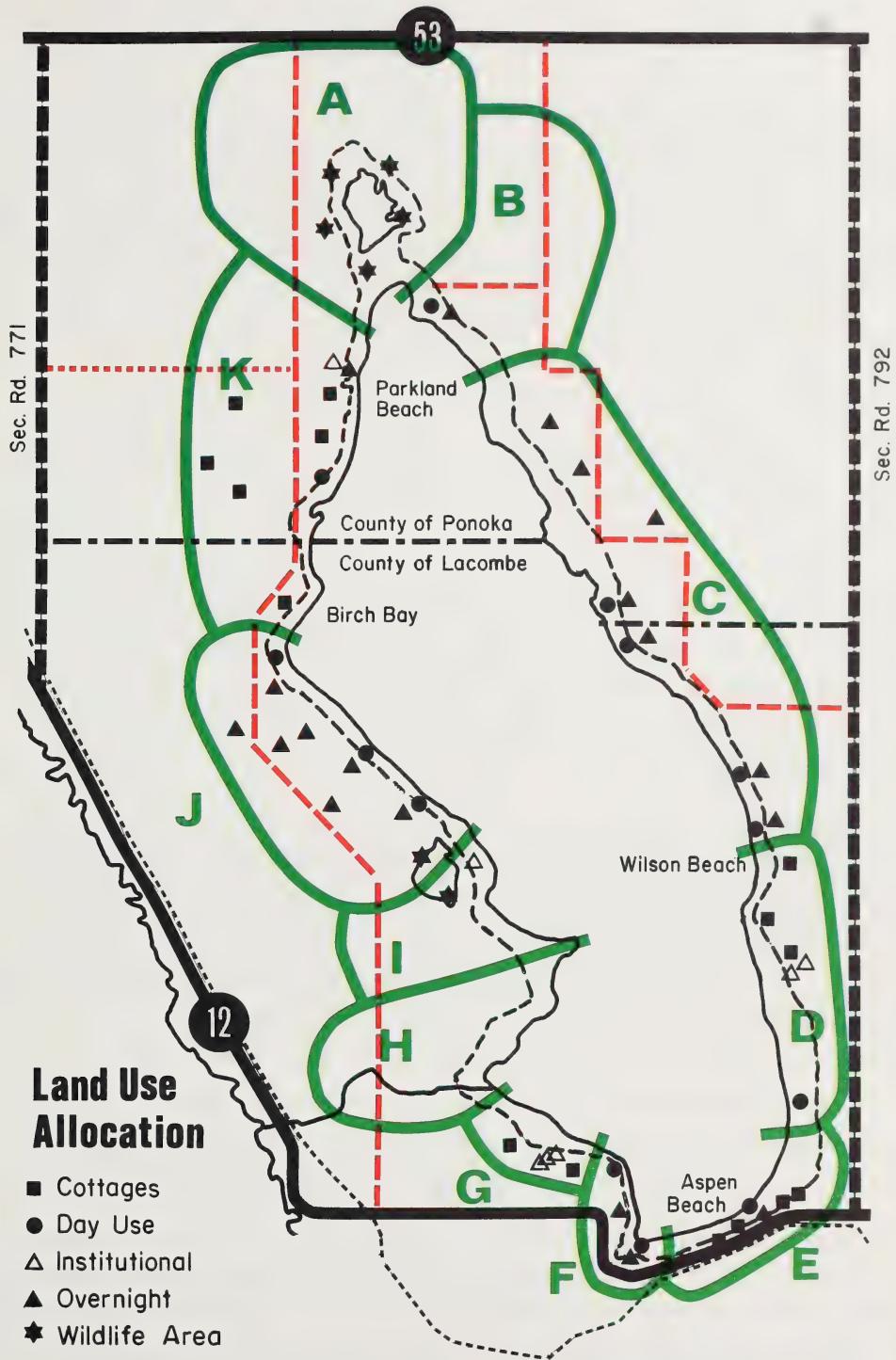
Area A is an extremely productive wildlife area particularly for waterfowl but also for gulls, other non-game birds, and ungulates. To protect the natural characteristics of the area, no development is allocated and it is recommended that efforts be made by Alberta Recreation Parks and Wildlife to undertake a wildlife management study of the Gull Lake area to discover the most appropriate wildlife management approach.

#### Area B

At the present time, much of Area B is devoted to agricultural activities and existing recreation development is limited to a small informal day use area and campground. For Phase I, 200 day use units are suggested and for Phase II if demand is evident, a further 200 day use units and 100 overnight units.

#### Area C

Apart from a small combined campground and day use area, Area C is presently undeveloped for recreation purposes. In Phase I, 100 day use units and 450 overnight units are proposed and in Phase II 600 overnight units are allocated. Private



Prepared by: Red Deer Regional Planning Commission

commercial campgrounds and day use facilities are suggested for this area.

#### Area D

At the present time, Area D contains two institutional camps, three developed cottage subdivisions, and one undeveloped cottage subdivision owned by the County of Lacombe. For Phase I, 25 infill cottages and 25 institutional overnight units have been allocated and, in Phase II, 560 day use units are suggested for the undeveloped cottage area.

#### Area E

Most of Area E is occupied by the Summer Village of Gull Lake and two small cottage subdivisions, one at each end of the Summer Village. In Phase I, 91 infill cottages are suggested for an open area between the built-up area and Highway No. 12 and in Phase II, a 100 cottage lot expansion is projected to the east. Also proposed is annexation by the Summer Village of the two cottage subdivisions at each end of the Summer Village. The Summer Village Council has stated that the public is welcome to use the beach in front of the Summer Village for swimming or walking provided that permanent facilities such as barbecue pits and washrooms, or vehicles are not permitted.

#### Area F

Aspen Beach Provincial Park and a small number of cottages comprise Area F. No further units are expected during Phase I but by the end of Phase II, it is anticipated that the Provincial Government will have completed purchase of 24 cottages presently surrounded by the Park and will have provided an additional 200 day use units.

#### Area G

Included within this area are 72 cottages in linear shoreline subdivisions and three institutional camps. No development is allocated for Phase I while in Phase II, 72 cottages have been projected along the south side of the access road.

#### Area H

Since the Gull Lake water stabilization channel from the Blindman River enters the lake in this area, and because the shoreline is known for fish spawning, no development is allocated for either Phases I or II.

#### Area I

At the present time, Area I contains an institutional camp having 25 units. No additional recreation development has been allocated other than expansion of the institutional camp or the creation of new camps to a total of 88 units.

#### Area J

This area is presently undeveloped for recreation and no development is anticipated in Phase I. During Phase II, it is anticipated that the provincial government will be developing Crown lands in the area for another provincial park. This new park is projected to contain 1,700 day units and 2,400 overnight camping units.

#### Area K

Existing recreation development in Area K includes two cottage subdivisions, an Alberta Transportation picnic site, a private campground, and an institutional camp. Major cottage development is proposed with 135 designated for Phase I and 355 for Phase II. Overnight units at the institutional camp have been projected to increase by 20 in Phase I and 30 in Phase II. A public day use area of 200 units is indicated for Phase II on land purchased for this purpose, so that cottagers from backland subdivisions and other members of the general public can enjoy shorezone recreation. It is also suggested that the Alberta Transportation day use area at Birch Bay be closed when the new day use area in Area K is opened.

#### Policy Areas

In addition to land use designations, a management plan should also incorporate policies on points of concern which can serve as guidelines for management. To encourage discussion, several policy areas are presented here, although it must be emphasized that to be comprehensive, more input is needed from recreators, property owners, and others concerned with the planning of Gull Lake.

- With the exception of a few cottage infill lots, all future cottages are best located well back from the existing shoreline and above the original shoreline elevation of around 2,960 feet above sea level.
- Commercial recreation developments need to be encouraged to provide an adequate number of satisfying recreation opportunities.
- Because of apparent high wildlife capabilities of lands in Area A and further to the north, a wildlife management study should be undertaken.
- To avoid destruction of fish habitat, protection of aquatic vegetation should be considered.

- For purposes of safety, Highway No. 12 and the nearby railroad could eventually be relocated further south of the lake.
- Since recreators, who are not usually residents of local municipalities, make heavy use of county roads, it is recommended that the provincial government provide additional monies for road construction and maintenance.
- It is recommended that water surface use zones be established to separate swimming and boating.
- It is recommended that the lake level be regulated between 2,950 and 2,953 foot elevation.
- Monitoring of water quality is to continue and, should water quality decrease significantly, shoreland development intensity, lake level objectives, and the source of water for stabilization will need to be reconsidered.
- The ownership status and use of accrued land needs to be clarified by the provincial government. No permanent structures should be allowed below the historic shoreline elevation of around 2,960 feet above sea level.
- Surface water access points and related facilities such as launching ramps, docks, and marinas should be developed.
- Where subdivisions occur and where a municipality takes reserve lands, it is recommended that the municipality be prepared to administer and develop these sites for use of the immediate community or for public recreation purposes.
- It is recommended that all development proposals in the Gull Lake study area be referred to Alberta Culture for consideration with respect to the conservation of historical and archaeological sites.
- Building setbacks from the shoreline are best determined on a site by site analysis.
- Residential areas should only be permitted where individual sewage systems can be accommodated. For more intensive developments, alternative sewage disposal systems should be given close consideration.

- It is recommended that the Summer Village eventually acquire ownership of the Aspen Beach Provincial Park overflow area and two lots presently under a recreation lease from the province to be used as Village recreation space.

#### REQUIRED INPUT

To devise an efficient and agreeable plan, public input is essential. The hope is that by using this brochure as an information base, interested individuals and groups will be able to provide further guidance to achieve a sound and workable plan for Gull Lake.

Public information sessions in September will provide opportunities to express concerns. In addition, you are encouraged to send any comments you may have on building setbacks, access points to the lake, protection of fish and wildlife, or any other topic related to the planning of Gull Lake. Upon completion of these feedback sessions, the municipal councils will debate and approve a final plan which will then be forwarded to the Alberta Planning Board for final approval.

Please send comments to:

Red Deer Regional Planning Commission,  
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Box 5002,  
Red Deer, Alberta.  
T4N 5Y5.









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